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Ear care with protective measures during the COVID-19 pandemic. PERU

PHOTO: WORLD WIDE HEARING FUNDACIÓN INTERNACIONAL

Ear and hearing care in the midst of a pandemic

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Our world has changed. Life in a time of pandemic is a drastically different reality for all of us and the consequences of this new way of living are likely to last a long time. The ongoing COVID-19 pandemic has ended far too many lives and affected people of all ages, backgrounds and countries. Its direct and indirect effects are not restricted to the health of the population; it also affects livelihoods, autonomy and even some individual rights. Governments and civil society organisations are working to control or minimise the impact of this crisis, as well as preparing for future pandemics. It is no surprise that the way we address Ear and Hearing Care (EHC) has also changed, hence the decision to dedicate this issue to 'Ear and hearing care in the midst of a pandemic'.

Joining efforts at global and community levels

The current situation has made it painfully obvious to country leaders and community members that clinical medicine alone is not sufficient to deal with an epidemic, let alone a pandemic. It has revealed the weaknesses of many health systems, even in high-income countries, and led to the collapse of health procurement, delivery of care, emergency services and intensive care units in many nations. Governments and policy makers are now aware of the need to strengthen often complex and heterogeneous health systems and services, in order to guarantee the health of all people.

Community members have directly experienced and understood the necessity to have local access to reliable health services, in order to not die from the disease or suffer severe complications. In addition, persons with hearing or other disabilities face additional barriers which are often overlooked by public health measures. The challenges we face cannot be met by national and international instances alone, but by joining efforts at global and community levels; this will generate local collaboration and provide evidence and experience to inform international recommendations. Figure 1 (p. 2) shows a framework for disability-inclusive community action developed by the international non-governmental organisation CBM.

We should not neglect EHC

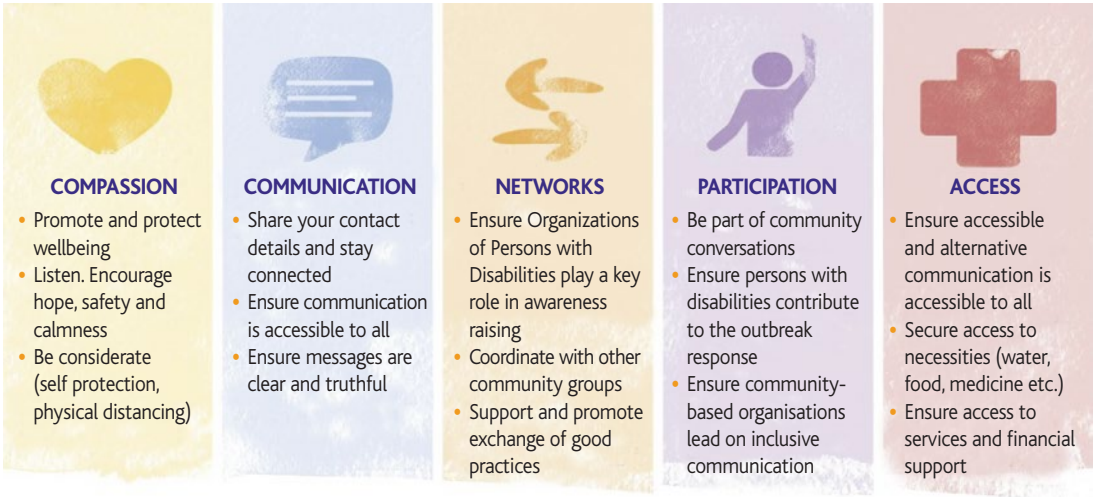
Ear and hearing care is an important aspect of a person's health and it should not be neglected during a pandemic. We firmly believe that it is the responsibility of all stakeholders to increase the '**audibility**' of EHC at all levels. We can be heard by being present at relevant discussion fora and included in decision-making bodies, to ensure the promotion of accessible EHC within the greater goal of universal

Continues overleaf ➤

ICED International Centre for Evidence in Disability

IN THIS ISSUE

FIGURE 1 DISABILITY-INCLUSIVE COMMUNITY ACTION: COVID-19 MATRIX



health coverage and to make sure EHC is considered in the strategic response to a pandemic.

Persons living with hearing disabilities or ear diseases, EHC personnel and other local stakeholders, can all advocate for and contribute to the design of a strategic response to the pandemic which would help avoid or minimise the sometimes severe consequences of:

- **A lack of accessible communication:** the need for face masks and physical distancing, as well as the absence of sign language interpretation and closed captioning in official briefings, all severely hamper communication for persons with hearing disabilities. In addition, the absence of sign language use and training during prolonged school closures directly contributes to widening the education gap between hearing and hearing-impaired children.
- **A lack of adequate assistive devices:** the disruption of services for the provision, maintenance and programming of hearing devices will further increase the isolation and vulnerability of children and adults with hearing loss.
- **A lack of effective ear health services:** if life-threatening ear problems are not promptly addressed, this may signify the difference between life and death.

We can increase the audibility of EHC by meaningfully and strategically delivering key messages, with the ultimate aim to have a stronger voice within health structures and public health plans. Messages shared need to be '**CRISP**', i.e. they need to have Clarity, Reach, Intensity, Solidity and Power:

Clarity: messages should be simple but comprehensive, and understandable by everyone.

Reach: we must aim for broad dissemination by repetition, use of mass media, public awareness campaigns, national programmes, conferences, etc. supported by joint actions across the world.

Intensity: we can increase the loudness of our messages through high-level advocacy targeting governments, Ministries of Health, the World Health Organization, the World Hearing Forum, etc.

Solidity (Consistency): we need to ensure that the message is consistent, regardless of it being delivered by different speakers, to different audiences or through different means.

Power (Effectiveness): we must ensure that messages are well researched, culturally relevant and effectively designed to influence decision makers, health sector professionals and civil society. Careful planning for local acceptance is essential for national or sub-national effectiveness.

This issue of *Community Ear and Hearing Health* shows ways in which people living and working in various low-resourced settings, during different stages of the pandemic, have advocated for ear and hearing health and found solutions to offer services in spite of limitations imposed by the fight against COVID-19. We hope this will encourage our readers to continue contributing to build a safer and more inclusive world, starting with their own local community and area of influence.

cbm christian blind mission

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For the paper version, may we suggest that readers in high-income countries make an annual donation of UK £10. Please contact Joanna Jeremy (as above).

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INCREASING THE 'AUDIBILITY' OF EAR AND HEARING CARE – EVEN DURING THE PANDEMIC

PHILIPPINES

Filipino Sign Language Access Team for COVID-19 (FSLACT4COVID19)

The first 75 days of the pandemic: a deaf-hearing alliance rises to the challenge

Lockdown across the Philippines commenced on 17 March 2020 after COVID-19 cases started increasing. Barricades were erected across all streets; workplaces, apart from essential services, were shut down. Curfew was imposed from 8 pm to 5 am. Everyone was caught by surprise. Most people within the deaf community were left behind, without the essential information needed for them to cope and survive the pandemic.

Anticipating the impact of this crisis on the deaf community, nine deaf and hearing leaders established the Filipino Sign Language Access Team for COVID-19 (FSLACT4COVID19) in Metro Manila. Over time the team grew to include over 70 deaf and hearing volunteers nationwide, largely using their own personal resources. It became the only group of its kind in the country, offering a range of accessible information about COVID-19, government provisions, and meeting the health needs of the deaf.

COVID-19 terminology was translated into Filipino Sign Language. Targeting the deaf community, including isolated or unschooled deaf persons, a stream of print infographics was created and over a hundred COVID-19- and quarantine-related signs were uploaded and published online as videos.

Within a month of the Team's lobbying and negotiations, insets were inserted in the daily programming of one public national TV station, and the two major private TV stations. Public service announcements on safeguards were signed daily on one primetime TV channel for one week. The team produced easy-to-understand information and infographics on the State programmes, how to access them, on local travel restrictions, on daily COVID-19 reports, on physical (social) distancing, handwashing, the purpose of masks, the provision of food relief and hygiene kits.

In addition, a team of Deaf agents, hearing interpreters and physicians were also on call to provide remote medical consultation online with deaf clients, using SMS and video calls.

FILIPINO SIGN LANGUAGE ACCESS TEAM FOR COVID-19

Sign language interpreter working remotely during the pandemic. PHILIPPINES

Towards the end of May, the Team took the initiative again and joined others to lobby for the inclusion of critical measures in the proposed legislation on COVID-19 recovery, including:

- Institutionalising sign language interpretation in TV news broadcasts and live-streamed public information programmes
- Recognising sign language interpreters as frontline workers
- Using accessible formats for workplace information/warnings, including in Filipino Sign Language and/or easy-to-understand text in the appropriate written language
- Ensuring that the National Broadband Plan provides reliable and high-volume support for online video streaming in compliance with the Filipino Sign Language Act
- Establishing a system of standards for Filipino Sign Language interpreting
- Sending a directive on disaggregated demographics to the Philippines Statistics Authority, National Disaster Council, Local Governments and Department of Health, to identify women, men, girls and boys with hearing and other impairments.

The FSL Access Team are now engaging with the proposed COVID-19 Bill and in Senate Hearings on Inclusive Education for learners with disabilities. The Team's volunteers continue to ensure that the deaf community is not left behind, contributes to the fight against the pandemic and is fully included in the nation's development.

ETHIOPIA

CBM Country Office in Ethiopia and CBM Core Advisory Team for EHC

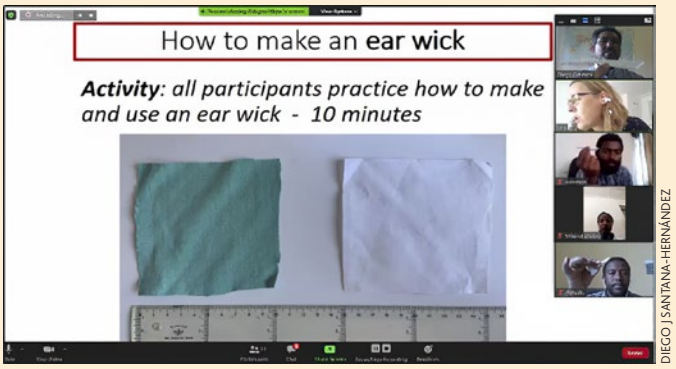
Online Training of Trainers workshop for health and community workers

The revised version of the World Health Organization's (WHO) *Basic Ear and Hearing Care Resource* was launched virtually on World Hearing Day 2020 (see https://bit.ly/3qwiFoL). In order to continue building capacity during the pandemic, CBM Advisors for EHC piloted an online training of trainers workshop using this resource, with the help of CBM's country office in Ethiopia and WHO's Ear and Hearing Care Team.

Participants: there were 20 in total located in Ethiopia, including Community Health Workers, nurses, ENT doctors and residents, teachers, and NGO workers.

Connectivity: the country office provided technical support to organisers and participants for online connectivity: data packs were purchased, as well as a platform license (Zoom©) for unlimited online access. The training team carried out a trial session two days prior to the event, to check participants' online connectivity and familiarise them with the online training platform.

Materials: digital copies of the *Basic EHC Resource* were shared in advance, as well as the list of home materials for



DIEGO J SANTANA-HERNÁNDEZ

Screenshot taken during the online workshop on basic EHC.

practical exercises (a piece of clean cotton wool and a 10x10 cm piece of cloth or firm tissue paper). All the online workshop materials were compiled in a single PowerPoint presentation to avoid technical problems during the live training session.

Workshop: it included 10 short videos on aspects of EHC (e.g. eardrop instillation), as well as testimonials (e.g. deaf persons and hearing relatives), and practical interactive demonstrations (e.g. ear wicking). There were opportunities for discussions and local sign language interpretation was provided by local persons. The feedback questionnaire showed that the workshop was very well received.

Coping with the pandemic: ensuring persons with hearing loss are included

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Sally Harvest
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The impact of the COVID-19 pandemic has been felt by all people in low-, middle- and high-income countries, and people with disabilities are no exception. However, qualitative research carried out by the UN Stakeholder Group of Persons with Disabilities for Sustainable Development shows that the pandemic has created new barriers for persons with disabilities and warns that: 'Inclusion has been disrupted by the COVID-19 pandemic and we are at risk of going backward.'[1] The most common barriers identified by this research were:

- Lack of access to COVID-19-related information for persons with disabilities
- Difficulties in accessing social protection measures and employment difficulties (first to lose employment; accessibility barriers in virtual working environment)
- Lack of disability inclusion in COVID-19 response efforts at all governmental levels.

Although all persons who are vulnerable or have a disability are particularly affected by the pandemic,[2] this article focuses specifically on barriers encountered by people who are deaf, hard of hearing or deafblind.

SALLY HARVEST

Cochlear implant user wearing a face shield. UK

Communication about the pandemic: including persons with hearing loss

People who are hard of hearing, deaf or deafblind report that the biggest challenge they face is a lack of access to information at all levels. In some settings, deaf people were unaware of the virus and of what they needed to do to protect themselves.[3]

Official information about the pandemic is continuously evolving and is often first communicated via emergency televised briefings. Briefings provide essential information about the virus, current measures to limit infections, where to get social protection support, and where to get essential care when some hospitals have been designated COVID-19 treatment centres and the usual services have been transferred elsewhere.

Although many countries have recognised the need to provide sign language interpretation during all briefings, there are also many who have not. Even when sign language interpretation is available within a country, this may not be widely available in rural and remote places. All information needs to be available in a variety of formats in order to reach the whole population.

CBM LAOS

Trainer of deaf persons using a face shield without a mask to enable lip-reading. LAOS

Communication needs are an individual choice, but the following are essential considerations to ensure the inclusion of persons who are deaf, hard of hearing or deafblind:

1. Liaise with organisations of persons with disabilities (OPDs) at national as well as local level. OPDs have played a crucial role in addressing communication gaps during this pandemic.[4]
2. Offer sign language interpretation (international, national, local, tactile).
3. Provide closed captioning on television, video footage intended for social media, and for online group meetings.
4. Set up Text helplines, not just phone helplines.
5. Provide the information in a variety of visual formats appropriate for all ages and settings:
   - written materials, including 'easy read' format
   - illustrated materials, in print or video.
6. Provide information in accessible formats for deafblind persons (braille, tactile sign language).
7. Make use of social media that do not rely on voice (e.g Facebook and WhatsApp groups).
8. Ask about communication needs or carry a card explaining one's own communication requirements.
9. Put up posters on the Dos & Don'ts of good communication with people with hearing loss:
   - Face the person when you speak to them
   - Ensure there is good light on the speaker's face
   - Get the person's attention before speaking
   - Make sure there are no distractions – especially loud noises
   - Speak clearly and more slowly – repeat if needed
   - Do not shout or make exaggerated movements
   - Use gestures, drawings, pictures – point at things
   - Do not over protect the person – they should be included

TESTIMONIAL

Devin Rajapaksa, Sri Lanka

I'm 60 years old and have suffered from severe hearing deficiency for 20 years. This has made me reluctant to go out and interact with people, because hearing-impaired persons are treated in an insulting manner. People may speak loudly in an ironic manner and even laugh when the wrong answers are given to the questions they ask. During the pandemic, I could not purchase new batteries or service my hearing aids. I had to wait until the pandemic was controlled and shops reopened. The pandemic did not affect access to the Internet. WhatsApp and Facebook were good platforms because they are not directly associated with verbal communication: communication needs could be fulfilled by texts. I did not rely on any type of phone calls (audio or video), as they were difficult to manage.

- Point to your lips to encourage lip-reading (if you are not wearing a mask)
- Use and encourage the use of transparent face masks or shields when appropriate to infection risk level
- If the person has hearing aids, they should be encouraged to wear them.

10 Carefully explain the need for physical distancing and have a system in place to manage it that includes visual reminders (e.g. tape).

11 When in groups, speak one at a time, have a system in place for indicating understanding.

Consider how public health measures affect persons with hearing loss

Confinement

Many have been asked to stay at home to stop the spread of the virus. In some countries, this lockdown has been very strict and there is little understanding or compassion for persons with disabilities. This can lead to feelings of isolation, fear, confusion, as well as mental heath problems. This is especially the case if a person does not have access to public health messages; persons living alone may have no access to a telephone or a television, and radio messages may not be understood.

When support systems exist (e.g. delivery of medicines, mental health support), it is important to communicate about them in an accessible way (e.g. face to face, written note, or social media).

Persons with hearing loss can also indicate their needs (e.g. by carrying a card indicating communication needs, or by putting notes in their windows e.g. 'need shopping'). Local OPDs have played a very important community support role.[4]

Physical distancing

This has been adopted in many countries and has created barriers for people living with hearing loss:

- Distance between people makes listening (or hearing) and lip-reading more difficult.
- Restricting the number of people allowed in the same space, e.g. during a hospital visit, has meant that many hard-of-hearing and deaf people were unable to take their sign language interpreter with them to their appointments.
- Such restrictions will also affect a person who is deafblind and requires both assistance with mobility and tactile signs for communication. It is advisable that people living with deafblindness carry a card with them explaining their need to have communication support during hospital visits, with personal protective equipment (PPE) made available to them and their interpreter.

Face masks

The requirement to wear face masks drastically restricts communication for people who are hard of hearing or deaf, because voices may sound muffled and it is impossible to lip-read and see facial expressions.

The following can help minimise poor communication and misunderstanding:

- Using masks with transparent windows, which allow lip-reading (N.B: these may not meet safety criteria in clinical situations)
- Using transparent plastic face shields, even if homemade
- Having pens and paper available to ease communication by writing or drawing to get the message across
- With some mobile phones, speech-to-text apps can be used.

The Box on this page also details communication tips when wearing a mask.

Note: Persons wearing hearing aids or cochlear implants need face masks that do not 'knock off' their aids, e.g. face coverings with longer ties at the back of the head. They should take their aids off, put the mask on, then put their aids back on.

Low- or no-touch preventive measures

Preventing the transmission of the virus has meant reducing direct contact with objects or people in public spaces. This reduces opportunities for offering a helping hand and creates accessibility barriers for deafblind persons (who may need guidance to get around, and need tactile or sign language for communication).

Conclusion

In many countries one of the most important aspects of the COVID-19 story so far is that communities have gained a new respect for people who work in health and social care and are willing to risk their own health and wellbeing so that those in need can receive care, support and treatment.

We need to be compassionate in all aspects of our lives as we learn to support each other through the current crisis, in our personal and professional lives. Compassion should be an essential part of service delivery and of public health messages, to ensure that no one is left behind.

HOW TO IMPROVE COMMUNICATION WITH A HARD-OF-HEARING PERSON WHILE PHYSICALLY DISTANCING AND WEARING A MASK

Wayne Gidden, vocal coach, London, United Kingdom

- Whenever possible, stand in a place where background noise and distractions are reduced.
- Face the person and make sure you have their attention before you speak.
- Be clear about what you are going to say. Do not start speaking without thinking, do not ramble.
- Speak every word very clearly. Keep sentences short and to the point. Make sure that you complete your sentences and do not trail off mid-sentence.
- Keep eye contact and check the person's understanding by watching their face (even if you can only see the top half of it) and movements (e.g. nodding). Repeat if you need to.
- Increase the volume of your voice appropriately, without shouting. If you find this difficult, the following tips will help:
  - Focus only on the person you are speaking to and imagine your voice travelling exactly the distance between you.
  - Make sure you do not run out of breath, as otherwise your voice will lose volume.

This way of speaking requires more concentration than we are used to in casual conversation (even with masks) but it will very much improve communication with a person who is hard of hearing. This will go some way towards overcoming the extra difficulties posed by distancing and wearing a face covering.

CEDAF

Clear face masks enable lip-reading. GUATEMALA

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Providing remote ear and hearing care during the pandemic

Paddy Ricard
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Please note that our answers were collected late July and early August 2020 and do not take into account remote services that may have been developed at a later stage in the pandemic.

We would like to thank the following people for kindly answering our questions:

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In 2005 the World Health Organization (WHO) recognised eHealth[1] – the use of information and communication technologies (ICT) to advance health – as a growing field and created the Global Observatory for eHealth (GOe), to shape and monitor eHealth especially in low- and middle-income countries (LMICs). Telehealth – the interaction between a healthcare provider and a patient when the two are separated by distance – is now seen as a way to '[improve] access to healthcare, i.e. it increases the speed of access and/or reduces the cost'[2] and, when well planned, as a way to help achieve universal health coverage.

The COVID-19 pandemic has, however, presented us with a very different situation in which to develop remote care. Many healthcare providers have been thrust into a situation in which remote consultations, in some shape or form, had to be set up. Ear and hearing care (EHC) providers, like others, have had to come up with creative ways to care for patients while drastically reducing face-to-face contact with staff.

We wanted to get a sense of the variety of these adaptive responses and record some of the solutions being used during the pandemic, so in July 2020 we reached out to seven collaborators in six different countries: international NGO CBM's country office in **Burkina Faso**, an Otolaryngology Head & Neck Surgery Department in **India**, a Department of Otorhinolaryngology in **Nepal**, the CEDAF audiology centre in **Guatemala**, the World Wide Hearing Foundation International in **Peru** and, finally, an ENT consultant and past President of the College of Otorhinolaryngologists, as well as a large private audiology firm, both located in **Sri Lanka**.

Finding solutions to offer remote EHC services

The following were the most commonly offered solutions:

Helping hearing aid users

Respondents mentioned that it was difficult to offer hearing aid fittings to new patients during the pandemic.

Remote programming

Increasingly, hearing aid manufacturers offer telecare services for certain hearing devices; it is possible for audiologists to access usage data and to fine-tune and troubleshoot a hearing device whilst remotely connecting with the user via phone or video call. One of our respondents, a private audiology firm in Sri Lanka, made use of this option during the pandemic for those clients who had high-end hearing devices.

This solution is by no means the norm in LMICs and requires not only a high-end hearing aid but also access to, and familiarity with, technology. Our respondent in Guatemala decided to offer remote programming to the few patients who had the right kind of hearing aids but this required them to first contact patients and ask them to send in their hearing aids so that the software could be upgraded. This had a limited impact, due to the age of these persons. They observed that 'older adults [...] do not like technology in general. They require someone on their side to do it, and often they do not like that either.'

WORLD WIDE HEARING FUNDACIÓN INTERNACIONAL

"These people received free batteries by authorised courier during lockdown: the situation was chaotic and many parents did not want their children to leave home for any reason. In that scenario, we did not want to leave our patients alone." PERU

Maintenance and repair

Our respondents found ways to deliver batteries through approved delivery services; one contacted patients by phone to ask for their needs, while another received battery orders through WhatsApp and SMS messages.

General maintenance of hearing devices, however, was a problem when face-to-face services had been suspended or patients were often fearful to use them. Our respondent in Peru tried a number of solutions. They created short videos showing how to care for hearing aids and sent them via WhatsApp. It is worth noting that their patients were children, who were naturally helped by parents more familiar with technology. Parents were also asked to mention any problems experienced with the hearings aids; the provider would then tell them (by SMS or WhatsApp video) how to solve the problem by themselves, if that was possible.

Speech and Language Therapy sessions

Out of the five respondents who offered Speech and Language Therapy (SLT) sessions pre-pandemic, four made the transition to remote sessions because it seemed 'kind of easy'. The exception was our respondent in Burkina Faso, where mobile phone use is widespread but 'the mostly rural population has limited access to new ICT, notably the Internet.'

Remote SLT sessions were attempted in a variety of formats by a same provider, depending on what patients had access to and what they were familiar with. Our respondent in India dealt with a population 'quite

conversant with online platforms'. In addition to online sessions, they started developing an app to monitor and assist with SLT at home. The other respondents had to find formats that their patients could access. Our respondent in Guatemala offered their patients several communication options (Facebook, WhatsApp, Zoom) and opted for Zoom because it was free and patients knew of it although they had never used it before. Our respondent in Peru opted for Zoom and Skype for the same reasons. However, access to these platforms 'is restricted to patients with smartphones or computers, which in many cases are too expensive and not a priority.' For those who only had access to WhatsApp, our respondent in Sri Lanka sent short videos showing how to continue SLT at home. Our respondent in Peru also asked patients to record the exercises for feedback; in addition, 'in the most difficult cases when not even a video call was available,' they offered SLT instructions by phone and follow-up by SMS.

Respondents reported several reasons (besides access) why remote SLT was challenging:

- Patients had to familiarise themselves with the means of communication used.
- Even when patients had Internet access, they could struggle to connect for a long duration of time (e.g. 45 minutes for a session).
- It was more difficult to get children's attention during a session.
- Compliance was a challenge, especially with younger children, and the speech therapist had to remain engaged with and monitor the progress of their patients to ensure continued compliance.
- When payment was required, patients had to be asked to pay in advance (which they did not like) because some patients did not pay after an online session.

There were also some positive results: our respondent in Peru reported that they feared the sessions would not be as successful because parents had to remain by their child, but found instead that because parents had to remain engaged, their commitment increased and they understood how 'their participation was tremendously necessary for the good development of the therapy.'

ENT helplines and remote consultations

In many countries, non-urgent appointments were deferred and patients were asked not to visit hospitals unless it was an emergency. Attendance also decreased because people feared becoming infected. Three out of four respondents who offered ENT services before the pandemic set up hospital helplines for patients. Our respondent in Sri Lanka described that the telephone was the tool that they used most to communicate with patients: most hospitals had a telephone number manned 24/7 by an ENT doctor and, if medicines were needed, they were dispatched by the hospital through special post. Our respondent in India also mentioned that phone helplines were used to inform patients that video consultations were available as well using Google Meet and Microsoft Teams (for those who had a smartphone or computer/tablet). Our respondent in Nepal mentioned that, in addition to the hospital helpline, patients were also contacted on their mobile phones via Viber and WhatsApp because these platforms are used by many in the country.

CEDAF/ORBITAL

> **"At the end of most [remote] programming sessions, older adults will ask: 'This is OK for now, but when is my next appointment with you?'"** GUATEMALA

The advantage of these remote consultations were that patients with minor problems could be kept away from the hospital. The various disadvantages reported were:

- It was impossible to diagnose diseases that need to be identified by otoscopy, endoscopy or examination under a microscope.
- Postoperative care (e.g. dressings) and urgent surgeries could sometimes not be attended to on time.
- Some patients missed having a direct interaction with the doctor and 'felt underdiagnosed or not so satisfied by distant communication'.
- Doctors had to spend long hours in front of a screen.

Communicating with the community

Before the pandemic, all of our respondents engaged in activities promoting ear and hearing health in the community at large: mass hearing screening in schools, rural or underserved communities, mass hearing aid fittings, as well as 'ear camps' offering ENT consultations and sometimes surgery.

All of these activities were suspended when the COVID-19 pandemic made it necessary to limit direct contacts. Limited actions were sometimes taken to continue raising awareness of ear and hearing health in the community: our respondent in Burkina Faso, for example, focused on radio broadcasts explaining how to take care of your ears. This was a 'no-contact' way of reaching many people in a country where 'telehealth is currently difficult to envisage'. In Sri Lanka, the college of ENT surgeons produced press releases and video clips on ear health both for mainstream media (television, radio, newspapers) and for social media (Facebook, Instagram), as well as SMS messages. In some cases, mainstream and social media were also used to advertise helplines and available remote consultations.

TONY SIRIMANNA

Information poster on COVID-19. SRI LANKA

Reflecting on remote EHC solutions offered during the pandemic

The EHC practitioners who answered our questions all worked in LMICs but faced different local situations with regard to public health responses, confinement rules

and infection rates. They also worked in different health facilities and served different types of communities; for example, it would have been inconceivable to set up Google Meet consultations – such as the ones offered by our respondent in India – as a solution to care for rural patients in Burkina Faso with no Internet access.

In spite of these differences, however, the answers we received hint at questions we might want to ask ourselves about remote consultations during the pandemic.

Which patients are being helped by remote EHC?

WHO's Global Observatory for eHealth mentioned in a 2016 report that 'Telehealth can contribute to achieving universal health coverage by improving access for patients to quality, cost-effective health services wherever they may be. It is particularly valuable for those in remote areas, vulnerable groups and ageing populations'.[3] Indeed, in LMICs, telemedicine is often seen as a means to offer services to underserved and underprivileged communities. For example, two of our respondents, in India and Sri Lanka, mentioned using mobile vans before the pandemic, to offer rural communities access to care. In the case of those services, although an EHC specialist analysed data remotely, a mobile team had direct contact with patients.

The pandemic presented us with a different situation: in the absence of direct contact, both patient and provider were required to have access to some form of ICT and the question of 'who' could be helped was very much limited by the 'how' of remote services. Remote services once used for the underprivileged were now best able to help the most privileged patients. For example, one of our respondents in Sri Lanka started advertising video consultations in the search for new clients, when their experience of telemedecine before the pandemic had focused on mobile vans in rural areas.

How should we approach 'connectivity' in remote EHC?

Even with new ICT, the world is not connected by a single 'Internet' or even by 'mobile phones'. These terms encompass a variety of connections and devices. A recent report by the International Telecommunication Union maps out variations in access to ICT between regions, as well as the type of ICT (such as simple mobile phone, mobile or fixed broadband). In 2019, almost 87% of people used the Internet in developed countries, whereas only 19% of individuals were online in the least developed countries.[4]

Access to the Internet is limited by infrastructure, location, and cost. These factors are often connected; the absence of local fixed network infrastructure means that Internet traffic takes a more circuitous and expensive route[5] and broadband is most expensive in the least developed countries.[6] There is also the question of available bandwidth, which limits remote services patients have access to.

It is very clear from our respondents that, even in the same country, thinking about 'connectivity' as a homogenous obstacle to overcome in telehealth is not particularly helpful. If a patient had a mobile phone, it did not mean that they had 'internet access': if a patient could make a WhatsApp video call, it did not follow that they could take part in a long Zoom session.

Faced with a spectrum of access and connections, our respondents adapted by offering different remote services tailored to their patients' access to ICT. It may be that, going forward, planning a 'menu' of remote EHC options will be a good way to help as many patients as possible.

CBM-BURKINA FASO

> **"Telehealth would be difficult to set up in Burkina Faso right now. The vast majority of the population uses mobile phones, but Internet access is limited."** BURKINA FASO

What is the impact of remote EHC on services?

All of our respondents reported that the pandemic had increased their use of technology to provide care in small and big ways, from providing instructions by SMS to developing an app. Providers had to become more familiar with technology and many patients found themselves using means of communication they had not used before.

Sometimes the use of technology led to suggestions for improving practice, such as increased parental involvement in SLT sessions in the case of our respondent in Peru, or the use of WhatsApp to communicate results and reduce waiting times for audiology patients in Burkina Faso. In other cases, the effect was less positive; e.g. in Guatemala, our respondent reported that patients saw remote programming sessions as 'making do' until a real appointment could take place. As months go on and the pandemic evolves into second or third waves, it is likely that some form of these remote services will remain when normal life resumes. It will then be necessary to monitor how these EHC services compare with their face-to-face versions, and how best to use them – something which was difficult to do when trying to adapt to the pandemic.

Conclusion

The Broadband Commission for Sustainable Development has highlighted that half of the world's population is not connected to the Internet and has set accessibility targets for 2025.[7] Although there have been several recent innovations that could facilitate telehealth in ear and hearing care, such as tele-otoscopy and tele-audiometry, their use in underserved populations is still limited by what has been termed the 'digital divide'.

We hope the examples mentioned here showcase the ingenuity and dedication of EHC providers in maintaining some level of care in adverse circumstances. In its simplest form, remote EHC during the pandemic was a way of communicating with patients at a time when many were experiencing anxiety and isolation.

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Lessons from the COVID-19 pandemic: adapting ear and hearing care

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The ongoing COVID-19 pandemic has affected many aspects of our life and work. As a consequence, it has become necessary to adapt our professional practice to an unstable situation where public health and service delivery in the field of ear and hearing care (EHC) may change from one day to the next.

There are five main types of providers of EHC: community workers; primary health care (PHC) services, ear, nose and throat (ENT) departments, audiology services, and speech and language therapists (SLT). It is very difficult to provide recommendations on how these EHC workers can adapt to a new reality that will very much depend on geographical location and will furthermore keep evolving. Instead, this article aims to provide a framework for EHC personnel to navigate the different stages of the pandemic and still deliver essential EHC services.

The five stages of a pandemic

We have found it helpful to use the classification used by LumaHealth[1], with some minor adjustments. The stages described in the Box on this page should be taken as a flexible guide, since a country or district can move between stages at any given time, depending on circumstances.

Five elements to consider throughout the pandemic

Although any planning effort will face huge uncertainties, we have identified five key elements that should be taken into consideration by all EHC services during each stage of the pandemic and can be used as touchstones when managing the inevitable disruption.

1 PROTECTION FROM INFECTION

What do we need to do to protect staff and patients from infection and make sure our premises and procedures are safe?

Stage 1

- Provide personal protection equipment (PPE) and appropriate disinfection products to EHC staff, particularly in community and rural settings, where accessibility and affordability are a challenge. Train them in the correct usage of PPE and sanitation procedures.[2]
- Identify members of staff with underlying health conditions which render them more susceptible to developing a serious infection and, where possible, place them in less exposed situations.
- Plan the reorganisation of premises to observe safety guidelines.
- Circulate protocols for the safe delivery of EHC services.
- Circulate protocols for the suspicion, diagnosis and management of potential cases and contacts (in line with national and/or district guidelines if already available).

FAHAD KAIZER/UN WOMEN CC BY-NC-ND 2.0

Community workers putting up posters on protective measures against COVID-19. BANGLADESH

Stage 2

- Apply the safety measures planned during stage 1.
- Ensure adequate use and continuous provision of PPE and disinfecting solutions.
- Limit face-to-face services and arrange appointments to avoid too many patients turning up at the same time.
- Ensure protocols for the safe delivery of EHC services are up to date and in line with national regulations and restrictions.
- Establish an internal system to keep track of infected staff and give isolation advice for staff contacts.

Stage 3

- Err on the side of caution when using PPE; establish levels of priority for its rational use.
- Further limit face-to-face EHC services and use remote service delivery whenever possible.

Stage 4

- Ensure safety protocols are still followed when reintroducing more face-to-face EHC services.
- Maintain telehealth services (video or phone) to reduce on-site presence and limit infection risk.

Stage 5

- Apply safety measures, as instructed by health authorities.
- Reintroduce outpatient care with safe distancing and limited capacity.
- Continue regular testing among staff, as per epidemiological advice.

2 PRIORITISING

There will come a point in the pandemic when you need to establish an order of priority within EHC services, either because the risk associated with the provision of certain services will become too high for patients and/or staff, or because resources will be too stretched to provide the full range of care.

What are the conditions that need to be seen straight away?

Essential EHC services include those required to guarantee the adequate management of the key conditions outlined in Table 1. These should be

Continues overleaf ➤

FIVE STAGES OF A PANDEMIC

Stage 1 Getting ready for disruption
Although health personnel are aware of the pandemic and of contamination risks, there are no local outbreaks and no official public health measures have been announced.

Stage 2 Operational disruption
Public health measures have been put in place. There are now local cases and some disruption to services. As the number of suspected cases increases during this stage, non-critical appointments will be suspended.

Stage 3 Peak infection and crisis management
The number of cases has risen dramatically, many health services are overwhelmed and many non-essential services have been suspended.

Stage 4 De-escalation of crisis conditions
Infection rates begin to fall and some restrictions are lifted. A number of normal services resume, in line with safety guidelines.

Stage 5 The new normal
Infection levels are managed; normal life has mostly resumed, although with new safety measures in place.

addressed without delay, either at the first entry point or by referral to other health establishments.

Which face-to-face EHC services can be deferred?
Some EHC services such as non-urgent consultations, operations and other interventions, can be deferred. You should decide on a timeframe for reviewing postponed procedures and consultations.

Public health activities related to EHC will also need to be deferred (e.g. screening and immunisation).

Which services could be offered with low or no touch?
This particularly concerns audiology and speech and language therapy, where services can be provided behind a protective screen or booth, but also those EHC services which can be effectively delivered by telehealth platforms.

Training and capacity building may also be organised remotely, if resources and Internet access allow it (see p.3).

On an operational level, the following needs to be done:

Stage 1
- Agree on key conditions and EHC services that will continue to be available during stages 2 and 3.
- Agree on services that can be offered with low or no touch if needed.
- Agree on non-essential services, and decide on a timeframe for reviewing postponed consultations.

Stage 2
- Circulate a list of key conditions that need to be assessed by an EHC worker, either face to face, virtually, or by telephone.
- Prepare and start using telehealth methods as much as possible.
- Organise the delivery of agreed EHC essential services.
- Put non-essential services on hold.

Stage 3
- Limit the delivery of face-to-face services to essential EHC (see Table 1).
- Use telehealth as a default whenever possible.

Stage 4
- Review priorities to carefully extend the list of face-to-face EHC services.
- Maintain successful telehealth services to minimise on-site EHC.
- Prepare EHC services for the backlog of outpatients and deferred consultations.

Stage 5
- Plan for an increased number of consultations related to the maintenance and repair of hearing devices.
- Prepare and manage a prioritised waiting list of postponed EHC interventions.
- Incorporate into daily EHC practice those telemedicine services that have proven useful.
- Explore with public health authorities which activities could be safely reintroduced in the community, to avoid a disproportionate rise in the number of new ear and hearing conditions after the pandemic, due to a lack of awareness, immunisation, screening, diagnostic tests and early interventions.

3 COMMUNICATION

What information do we need to communicate to staff and patients, and how can we make sure it is accessible to persons with disabilities? Accessibility is particularly important, since many users of EHC services have some degree of hearing impairment. The article on page 4 of this issue offers detailed advice on this matter.

Stage 1
- Raise awareness amongst users and health personnel about the seriousness of the pandemic and about measures for protection.
- Establish accessible communication channels with patients.

Stage 2
- Establish an internal system to keep track of infected staff, following data protection and confidentiality regulations.
- Monitor accessibility of information and communication channels.

TABLE 1 EHC CONDITIONS THAT MUST BE SEEN – EVEN IN A PANDEMIC

URGENTLY	AS SOON AS POSSIBLE
Recurrent acute otitis media (AOM) in children: this is a very painful condition which may cause serious complications, such as meningitis, brain abscess, and mastoiditis.	**Chronic suppurative otitis media (CSOM)**: this chronic discharge of the ear needs to be adequately diagnosed in order to plan for efficient management and avoid serious complications such as cholesteatoma, intracranial complications, facial palsy, etc.
Foreign bodies (FBs) in the ear: FBs can be very painful (sharp objects), disturbing (live insects), cause trauma (beads, cotton buds, hairpins) or become impacted if they swell up with water (seeds).	**Congenital malformations of the ear:** these conditions may be associated with hearing loss to a varying degree and with other malformations or health conditions. An early EHC consultation is needed to plan for appropriate treatment and to alleviate parental anxiety.
Ear or head trauma: a blunt trauma to the ear, e.g. caused by a slap or a sudden change in pressure, can perforate the eardrum, damage the ossicles, or even cause inner ear damage. Hearing needs to be assessed for accurate diagnosis and management.	**Suspected hearing loss in small children:** if not addressed promptly, congenital hearing loss is associated with delays in the acquisition of speech, language and cognitive skills.
Sudden unilateral or bilateral hearing loss: this is a serious condition and the chances of recovering are much greater if it is detected and treated very soon after onset. It may be associated with tinnitus, which is very disturbing for the person; more rarely, it may also be associated with tumours of the auditory nerve.	**Damage to or malfunction of hearing devices:** a person with a hearing disability depends on their hearing device(s) for meaningful communication. During a pandemic, good communication is crucial to understand risks and safety measures, as well as manage sudden changes to daily life. Repairs and spare batteries should be available.
Complicated otitis externa (OE): OE with severe pain and spreading cellulitis, as well as necrotising (or malignant) OE, is potentially life-threatening.	**Risk of serious mental health problems:** during stressful situations such as a pandemic associated with long periods of home confinement, it is important to pay attention to early changes in the mental health and wellbeing of persons with hearing loss, as they are at a greater risk of depression, self-harm or disorientation.

Stage 3
- Keep users and staff updated with fast-evolving information about the pandemic.
- Inform users of mechanisms for accessing essential EHC services, remote services, hotlines and emergency care.

Stage 4
- Raise awareness about the need not to relax protective measures.
- Inform and educate staff and users of the risks that remain in post-pandemic stages.

Stage 5
- Inform staff and users of protective measures which need to be continued, as instructed by health authorities.

4 RECORDING AND REPORTING

Recording and reporting information becomes crucial during a pandemic, when new outbreaks of the disease need to be monitored and contained.

In our own practice of EHC, we need to maintain our usual records as well as document new data, despite the pressures we are experiencing. It will be helpful to evaluate the outcomes of our services during the pandemic and to produce a report detailing the lessons learnt. This will make us better prepared if there is a new outbreak.

Here is a quick checklist that can be used at all stages:
- Are we keeping our usual records up to date?
- Is there anything new we need to record (e.g. test results)?
- Is there an official reporting protocol we need to follow?
- Are we keeping track of PPE and disinfectant stocks and planning ahead?
- Do we have up-to-date contact details for our patients?
- Are we continuing to ensure data confidentiality?
- Are we keeping track of the procedures and activities that we are postponing?
- Are we keeping track of users who are accessing our services in a new way (e.g. helpline, remote consultations)?
- Are we monitoring the outcomes of our services during the pandemic?

5 PROBLEM-SOLVING

From stage 2 ('operational disruption') onwards, it will be necessary to examine each unforeseen challenge disrupting EHC services and assess what can be done about it. The following are types of challenges that are likely to emerge:

Uncertainty about the risk associated with specific procedures

Some EHC personnel could be at higher risk because the pandemic is caused by a respiratory pathogen. It will be important to use trusted sources to keep up to date with the latest information regarding risks and safety.

PPE shortages

It will be necessary to rationalise the use of PPE and further reduce EHC services offered if the risk to staff is too high. Levels of priority for PPE will need to be reassessed at different stages.

Staff shortages and burnout

EHC services will need to be adapted to available staff. If testing is available, it will be easier to ensure only infected staff are isolating. In stage 4 ('de-escalation of crisis conditions'), it might be helpful to let staff have time off work, to avoid burnout in case of new outbreaks. It will also be useful to ensure personal and psychological support services are available for staff.

CEDAF/ORBITAL

Resuming EHC with protective measures against COVID-19. GUATEMALA

Difficulties in organising remote consultations

The article on page 6 of this issue mentions problems and solutions.

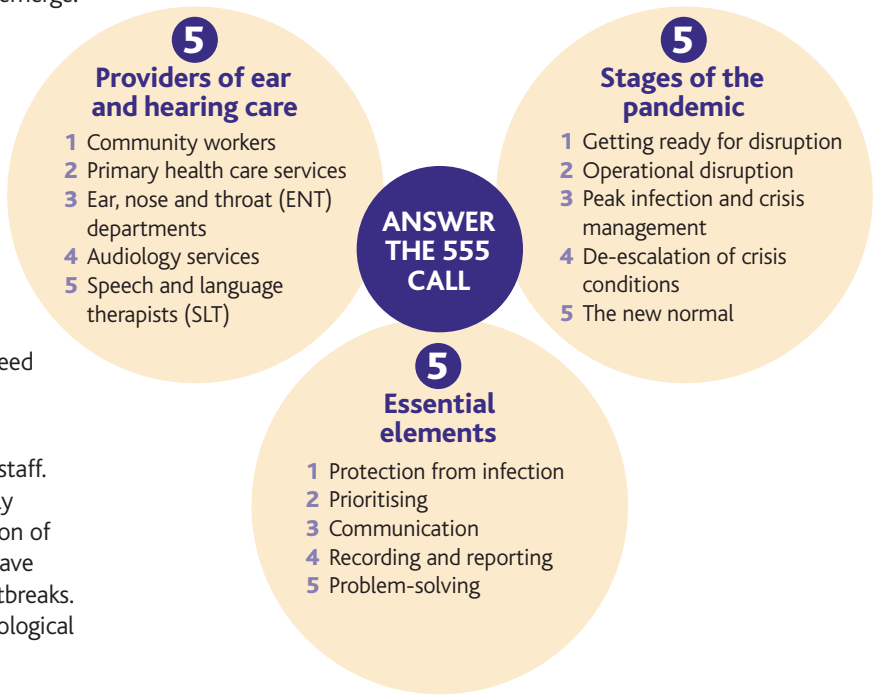
Consequences of COVID-19, direct or indirect

There may be direct consequences from COVID-19 or from the management of the infection, on ear and hearing health, as well as services and systems capability. There may also be indirect consequences from the suspension of activities such as vaccination programmes (eg. increased incidence of preventable EHC conditions related to rubella or meningitis). Again, it will be important to follow this evolving information from trusted sources.

Conclusion

The five essential elements mentioned in this article must be considered throughout the five stages of a pandemic, and they must be addressed by all five types of EHC service providers: Community work, Primary Health Care, ENT, Audiology and Speech and Language Therapy. We could call this the **rule of the three fives or simply '555'** (see Figure 2). As always in any multidisciplinary initiative, communication and collaboration are key ingredients to success. If we manage to make this '555 call' and work together, we stand a chance of overcoming this terrible pandemic and other epidemics in the future.

FIGURE 2 ANSWER THE 555 CALL



Reference

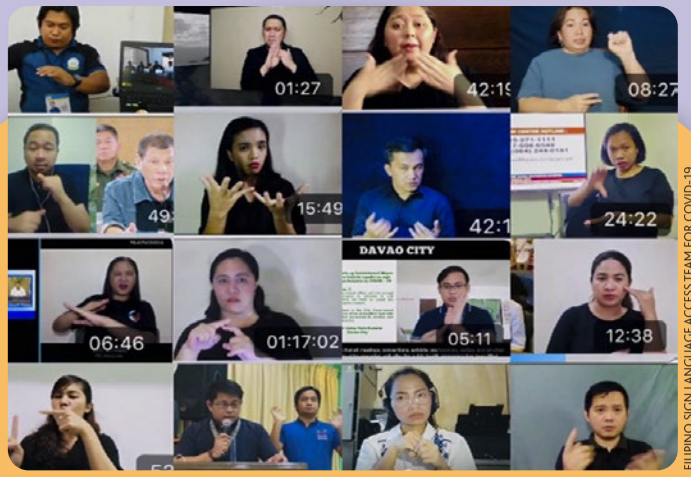
[1] Adnan Iqbal. First Look: Luma Health's Data Scientists Identify A Five-Stage COVID-19 Response For Healthcare. https://bit.ly/3n5LdDp (last accessed 10th December 2020)

[2] See Community Eye Health Journal vol 33 issue 109 (2020). This issue contains useful information on adapting services during the pandemic, cleaning and disinfection and PPE, specifically in low-resource healthcare settings. https://bit.ly/39X4S4A

Ear and hearing care: what can be done at community level during the pandemic

When face-to-face services are interrupted, you can still:

WHO; HTTPS://BIT.LY/3QWIFOL



FILIPINO SIGN LANGUAGE ACCESS TEAM FOR COVID-19

Make sure ear and hearing health is not forgotten

- Send messages to raise awareness of how to take care of your ears and hearing, using phone messaging, social media, radio, and print media
- Identify ENT, audiology, and speech and language therapy departments offering remote consultations
- Set up a support line for community members with ear and hearing problems and, in case of emergency, direct them towards specialist services

Make sure persons with hearing loss are included

- Facilitate inclusive communication about the pandemic (e.g. use printed materials, sign language interpretation, closed captioning)
- Raise awareness about communication barriers faced by persons with hearing loss (e.g. face masks)
- Help adults and children with hearing aids to obtain batteries and get in touch with maintenance services
- Support children who need help to access speech and language therapy

POSTER: PADDY RICARD & LANCE BELLERS